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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,399	12/23/2004	Koji Okomori	47172	2492
1609 7590 12/23/2009 ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P. 1300 19TH STREET, N.W. SUITE 600 WASHINGTON,, DC 20036				
EXAMINER				
BAREFORD, KATHERINE A				
ART UNIT		PAPER NUMBER		
1792				
MAIL DATE		DELIVERY MODE		
12/23/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/501,399

**Applicant(s)**

OKOMORI ET AL.

**Examiner**

Katherine A. Bareford

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 15, 2009 has been entered.

The amendment filed with the RCE submission of December 15, 2009 has been received and entered. With the entry of the amendment, claims 1-18 and 24 have been canceled, and claims 19-23 are pending for examination.

### ***Claim Rejections - 35 USC § 112***

2. The rejection of claims 5-7 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn due to the cancellation of claims 5-7 in the amendment of December 15, 2009.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurster et al (US 6197155) in view of Japan 11-050392 (hereinafter '392).

Claim 19: Wurster teaches a method for producing coated paper for printing. Column 1, lines 3-5. The coated paper is for offset printing. Column 1, lines 3-5. A coating color containing a pigment and an adhesive (binder) is applied to a base paper. Column 2, lines 50-65 and column 3, lines 5-15. The coating color application method can be roll coating methods such as the Massey coater (which is inherently a transfer roll coater method) or a metering size press. Column 4, lines 20-30. The coating weight can be 7 g/m<sup>2</sup>. Column 4, lines 40-45. The coating color contains adhesive (binder) in an amount of 3-18 percent by weight (3-18 parts by weight of the pigment). Column 3, lines 5-40 and column 6, lines 43-50. This overlaps with the claimed 5-50 parts by weight, and In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). The coating color can further contain, for example, 1 wt % polyvinyl alcohol (PVA) in relation to coating pigment (1 part by weight PVA to 100 parts by weight of the pigment). Column 2, lines 60-65 and column 6, lines 43-45 (the range of 1-

4%, column 2, lines 60-65, for example, overlaps with the claimed 0.1 to 1.0 range, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)). The polyvinyl alcohol can be in addition to other adhesive, and thus serves as an auxiliary to the extent claimed. Column 2, lines 55-68 and column 3, lines 20-40. The amount of starch present can be 0 percent, thus providing less than 2.0 parts by weight of starch as an adhesive. Column 3, lines 30-40 (and the range of starch can be 0-10 weight percent, which overlaps with the claimed 2.0 wt% or less, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)).

Wurster does not teach that the transfer roll coater system used has an inner roll, an outer roll, and applicator roll, the coating speed of 1100 m/min or more, the peripheral speed of the inner and outer roll to the applicator roll is 50-95%, and the application without misting or boiling. However, ‘392 teaches that when making coated paper for offset printing by coating with pigment and adhesive, it is desirable to use a gate roll coater with an applicator roll, an inner roll and an outer roll. See the abstract. Furthermore, it is desirable for the inner and outer roll speed to be 50-80% of the applicator roll. See the abstract. The adhesive can include polyvinyl alcohol. Paragraph [0017]. The coating speed can be 1200 m/min. Paragraph [0026].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wurster to use a gate roll applicator system and coating speed of 1200 m/min, for example, as suggested by '392 with an expectation of providing a desirable and speedy transfer roll coating system because Wurster teaches that roller application systems can be used (not limited to Massey coater, column 4, lines 20-30) to apply a coating system of pigments and adhesive to a paper surface and '392 teaches that a desirable roll coating system for applying a coating system of pigments and adhesive to a paper surface includes gate roll coaters and that such a gate roll coater would use an inner, outer and application roll and that desirable coating speeds for such systems would be 1200 m/min. Furthermore, it would have been desirable to use such a system with a peripheral speed ratio of the inner/outer roll to the applicator roll of 50-80% as suggested by '392 as a desirable speed ratio when using such a gate roll system. As a result of providing the claimed coating conditions and coating material features, the misting and boiling would also be prevented, as the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Claim 20: Wurster provides that the coating color can be 18 weight percent adhesive (binder) in relation to coating pigment (18 parts by weight of adhesive based

on 100 parts by weight of the pigment) or less, from the optimization of the range given. Column 3, lines 10-25.

Claim 21: Wurster provides that the starch can be considered part of the adhesive (binder). Column 3, lines 15-25.

Claim 22: Wurster provides that the adhesive can be styrol (the Examiner takes Official Notice that this is another term for styrene)-butadiene (thus is styrene-butadiene). Column 3, lines 15-20.

Claim 23: Wurster provides that the coating color can be 65 weight percent solids, for example, from the optimization of the 30-65 wt% given, as In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). Column 4, lines 20-25.

5. Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurster et al (US 6197155) in view of EITHER Garde (US 5015500) OR Alheid et al (US 4246301).

Claim 19: Wurster teaches a method for producing coated paper for printing. Column 1, lines 3-5. The coated paper is for offset printing. Column 1, lines 3-5. A coating color containing a pigment and an adhesive (binder) is applied to a base paper. Column 2, lines 50-65 and column 3, lines 5-15. The coating color application method can be roll coating methods such as the Massey coater (which is inherently a transfer

roll coater method) or a metering size press. Column 4, lines 20-30. The coating weight can be 7 g/m<sup>2</sup>. Column 4, lines 40-45. The coating color contains adhesive (binder) in an amount of 3-18 percent by weight (3-18 parts by weight of the pigment). Column 3, lines 5-40 and column 6, lines 43-50. This overlaps with the claimed 5-50 parts by weight, and In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). The coating color can further contain, for example, 1 wt % polyvinyl alcohol (PVA) in relation to coating pigment (1 part by weight PVA to 100 parts by weight of the pigment). Column 2, lines 60-65 and column 6, lines 43-45 (the range of 1-4%, column 2, lines 60-65, for example, overlaps with the claimed 0.1 to 1.0 range, and In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)). The polyvinyl alcohol can be in addition to other adhesive, and thus serves as an auxiliary to the extent claimed. Column 2, lines 55-68 and column 3, lines 20-40. The amount of starch present can be 0 percent, thus providing less than 2.0 parts by weight of starch as an adhesive. Column 3, lines 30-40 (and the range of starch can be 0-10 weight percent, which overlaps with the claimed 2.0 wt% or less, and In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)).



Wurster does not teach that the transfer roll coater system used has an inner roll, an outer roll, and applicator roll, the coating speed of 1100 m/min or more, the peripheral speed of the inner and outer roll to the applicator roll is 50-95%, and the application without misting or boiling. However, (1) Garde teaches that when applying coating to paper it is desirable to use a gate roll type coater with an application roll, an inner roll and an outer roll. Column 2, lines 30-60 and figure 1. Furthermore, the outer roll 10 can have a speed 25-100% of the paper web and applicator roll (which have the same speeds), and the inner roll 12 can have a speed 50-100% of the paper web and applicator roll. Column 4, lines 20-35. The speed of the paper web (and therefore, applicator roll) can be up to 5000 feet/min (1524 m/min). Garde provides a stabilized pool at the nip to provide for more uniform coating. Column 2, lines 15-50. (2) Alheid teaches that when applying coating to paper it is known to use coating applicators with a speed up to 4000 feet/min (1219 m/min). Column 1, lines 20-30. Alheid teaches a paper coater with an air knife system which it describes as not being limited to previous speed limitations of 1200 feet/min. Column 1, lines 28-40 and column 1, line 65 through column 2, line 5. The system uses a gate roll type applicator with an application roll, an inner roll and an outer roll. Column 2, lines 10-30, column 3, lines 1-40 and figure 1. The outer roll 14 can have a speed of 5-50% of the sheet speed, the inner roll 15 can have a speed of 30-75% of the sheet speed, and the applicator roll 16 can have a speed of 50-100% of the sheet speed. Column 3, lines 20-35.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wurster to use a gate roll applicator system and coating speed of at least 1100 m/min, for example, as suggested by EITHER Garde OR Alheid with an expectation of providing a desirable and speedy transfer roll coating system because Wurster teaches that roller application systems can be used (not limited to Massey coater, column 4, lines 20-30) to apply a coating system of pigments and adhesive to a paper surface and EITHER (1) Garde teaches that a desirable roll coating system for applying coating to paper webs is a gate roll applicator system with applicator, inner and outer rolls; where coating speed for such a system can be up to 1524 m/min, which would overlap the claimed range, and In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); OR (2) Alheid teaches that a desirable roll coating system for applying coating to paper webs is a gate roll applicator system with applicator, inner and outer rolls with an air knife; and where previous air knife speed limitations do not apply, thus suggesting to optimize the speed to as high as possible such as the described speed of 1219 m/min possible for previous coating methods, since "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). As to the ratio of peripheral speeds of the inner, outer and applicator rolls, both Garde and Alheid teach ranges of inner and outer roll speed (which would

be peripheral speed to correspond to the web/sheet speed measurements) that overlap the claimed ranges, and it would have been obvious to optimize the speed to within the claimed ranges as In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). As a result of providing the claimed coating conditions and coating material features, the misting and boiling would also be prevented, as the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Claim 20: Wurster provides that the coating color can be 18 weight percent adhesive (binder) in relation to coating pigment (18 parts by weight of adhesive based on 100 parts by weight of the pigment) or less, from the optimization of the range given. Column 3, lines 10-25.

Claim 21: Wurster provides that the starch can be considered part of the adhesive (binder). Column 3, lines 15-25.

Claim 22: Wurster provides that the adhesive can be styrol (the Examiner takes Official Notice that this is another term for styrene)-butadiene (thus is styrene-butadiene). Column 3, lines 15-20.

Claim 23: Wurster provides that the coating color can be 65 weight percent solids, for example, from the optimization of the 30-65 wt% given, as In the case where

the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

Column 4, lines 20-25.

6. Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurster et al (US 6197155) in view of Hayasaka et al (US 5972167) and EITHER Garde (US 5015500) OR Alheid et al (US 4246301).

Claim 19: Wurster teaches a method for producing coated paper for printing. Column 1, lines 3-5. The coated paper is for offset printing. Column 1, lines 3-5. A coating color containing a pigment and an adhesive (binder) is applied to a base paper. Column 2, lines 50-65 and column 3, lines 5-15. The coating color application method can be roll coating methods such as the Massey coater (which is inherently a transfer roll coater method) or a metering size press. Column 4, lines 20-30. The coating weight can be 7 g/m<sup>2</sup>. Column 4, lines 40-45. The coating color contains adhesive (binder) in an amount of 3-18 percent by weight (3-18 parts by weight of the pigment). Column 3, lines 5-40 and column 6, lines 43-50. This overlaps with the claimed 5-50 parts by weight, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). The coating color can further contain, for example, 1 wt % polyvinyl alcohol (PVA) in relation to coating pigment (1 part by weight PVA to 100 parts by weight of the pigment). Column 2, lines 60-65 and column 6, lines 43-45 (the range of 1-

4%, column 2, lines 60-65, for example, overlaps with the claimed 0.1 to 1.0 range, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)). The polyvinyl alcohol can be in addition to other adhesive, and thus serves as an auxiliary to the extent claimed. Column 2, lines 55-68 and column 3, lines 20-40. The amount of starch present can be 0 percent, thus providing less than 2.0 parts by weight of starch as an adhesive. Column 3, lines 30-40 (and the range of starch can be 0-10 weight percent, which overlaps with the claimed 2.0 wt% or less, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)).

Wurster does not teach that the transfer roll coater system used has an inner roll, an outer roll, and applicator roll, the coating speed of 1100 m/min or more, the peripheral speed of the inner and outer roll to the applicator roll is 50-95%, and the application without misting or boiling. However, Hayasaka teaches that it is well known to use transfer roll coating processes to apply coating color (of pigment and adhesive) to a paper substrate to provide desirable paper for printing. Column 6, lines 5-30, column 7, lines 10-15 and column 3, lines 30-35. Hayasaka teaches that desirable transfer roll processes include metering size press coaters and gate roll coaters. Column 6, lines 30-35. The gate roll coaters are described as using two gate rolls (which would provide an inner and outer roll) to supply coating color to the applicator roll. Column

6, lines 30-45. Hayasaka further teaches that the relative speed of the rolls in the gate roll coater system are controlled to provide desirable metering and application of coating. Column 6, lines 30-60. The gate roll coater system can be used to apply coating weight of 5-15 g/m<sup>2</sup> per side. Column 6, lines 45-65. Hayasaka further teaches to use coating speeds of about 600 to 1500 m/min, preferably between about 1000 and about 1500 m/min. Column 7, lines 1-5. Moreover, (1) Garde teaches that when applying coating to paper it is desirable to use a gate roll type coater with an application roll, an inner roll and an outer roll. Column 2, lines 30-60 and figure 1. Furthermore, the outer roll 10 can have a speed 25-100% of the paper web and applicator roll (which have the same speeds), and the inner roll 12 can have a speed 50-100% of the paper web and applicator roll. Column 4, lines 20-35. The speed of the paper web (and therefore, applicator roll) can be up to 5000 feet/min (1524 m/min). Garde provides a stabilized pool at the nip to provide for more uniform coating. Column 2, lines 15-50. (2) Alheid teaches that when applying coating to paper it is known to use coating applicators with a speed up to 4000 feet/min (1219 m/min). Column 1, lines 20-30. Alheid teaches a paper coater with an air knife system which it describes as not being limited to previous speed limitations of 1200 feet/min. Column 1, lines 28-40 and column 1, line 65 through column 2, line 5. The system uses a gate roll type applicator with an application roll, an inner roll and an outer roll. Column 2, lines 10-30, column 3, lines 1-40 and figure 1. The outer roll 14 can have a speed of 5-50% of the sheet speed, the inner roll 15 can have

a speed of 30-75% of the sheet speed, and the applicator roll 16 can have a speed of 50-100% of the sheet speed. Column 3, lines 20-35.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wurster to use a gate roll applicator system and coating speed of at least 1100 m/min, for example, as suggested by Hayasaka with an expectation of providing a desirable and speedy transfer roll coating system, because Wurster teaches that roller application systems can be used (not limited to Massey coaters) and that metering size press systems can be used to apply a coating system of pigments and adhesive to a paper surface, and Hayasaka teaches that a desirable roll coating system for applying a coating system of pigments and adhesive to a paper surface includes gate roll coaters and metering size presses, and that such gate roll coaters would use an inner, outer and application roll, and that desirable speeds of such systems would be about 1000 to about 1500 m/min, and as the specific speed of greater than 1100 m/min, In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). It would further have been obvious to modify Wurster in view of Hayasaka to provide that the peripheral speed of the inner and outer roll to the applicator roll can desirably be in the 50-95% range of the applicator roll speed as suggested by EITHER Garde OR Alheid with an expectation of providing a desirable and speedy transfer roll coating system because Wurster in view of Hayasaka suggests gate roll coating of paper with pigment and adhesive for offset printing and as

to the ratio of peripheral speeds of the inner, outer and applicator rolls, Hayasaka teaches relative speeds of the rolls in the gate roll coater system are controlled to provide desirable metering and application of coating, and both Garde and Alheid teach ranges of inner and outer roll speed (which would be peripheral speed to correspond to the web/sheet speed measurements) for gate roll coaters that coat paper that overlap the claimed ranges, and it would have been obvious to optimize the speed to within the claimed ranges as In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). As a result of providing the claimed coating conditions and coating material features, the misting and boiling would also be prevented, as the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Claim 20: Wurster provides that the coating color can be 18 weight percent adhesive (binder) in relation to coating pigment (18 parts by weight of adhesive based on 100 parts by weight of the pigment) or less, from the optimization of the range given. Column 3, lines 10-25.

Claim 21: Wurster provides that the starch can be considered part of the adhesive (binder). Column 3, lines 15-25.



Claim 22: Wurster provides that the adhesive can be styrol (the Examiner takes Official Notice that this is another term for styrene)-butadiene (thus is styrene-butadiene). Column 3, lines 15-20.

Claim 23: Wurster provides that the coating color can be 65 weight percent solids, for example, from the optimization of the 30-65 wt% given, as In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). Column 4, lines 20-25.

### *Response to Arguments*

7. Applicant's arguments filed December 15, 2009 have been fully considered but they are not persuasive.

(A) As to the 35 USC 103 rejection of claims 19-23 using Wurster in view of Japan '392, applicant argues that Wurster is directed to lightweight coated paper and specifically operates at lower speeds than the claimed invention, citing the examples in Wurster as to types of coating methods as including a jet flow such as a Massey coater or a scraper such as an inverted blade. The Examiner disagrees that the description of possible application processes at column 4 of Wurster limit the speed of the coating application. Wurster specifically provides that various application processes "such as . . ." may be used, indicating that others can be used as well, and further provides "The paper according to the invention is therefore essentially independent of the type of coat

application process" (column 4, lines 28-30). The Massey coater or KCM coaters described by applicant would thus merely be optional methods that can be used and do not limit the potential speed of application. As to the use of '392, applicant argues that this reference uses more starch than claimed or used by Wurster and also that this high starch specifically corrects problems of using high speed gate coaters as described in '392, and since Wurster uses a lower amount of starch, one skilled in the art would expect misting and boiling and would not be motivated to use '392 with Wurster's composition. The Examiner disagrees. Wurster teaches using roll coating processes in general (column 4, line 25), and one of ordinary skill in the art would clearly look to the art of coating materials with pigment and adhesive by roll coating to determine desirable roll coating processes and speeds to use, and '392 would be relevant as it is also directed to making coated offset paper for offset printing, with coating with pigment and adhesive, and teaches a desirable roll coating system and speed. As described by the claims and specification, the lack of misting and boiling would occur when the composition as claimed is used in combination with the transfer roll coater as used, and therefore further steps to prevent misting and boiling are not needed. As to the use of high amounts of starch to allow for the high speed coating, the Examiner disagrees that '392 is so limited. '392 discusses that high speed coating can be provided by control of features other than starch, such as concentration or viscosity (paragraph [0010]), and thus one of ordinary skill in the art would expect that the roll coating system of '392 would be successfully usable with the coating materials described by

Wurster. As to applicant's argument that coated papers containing more than 2 parts by weight of starch is not suitable for offset printing with more than 7g/m<sup>2</sup> coating per side leading to further problems, the Examiner notes that no showing has been made as to this issue and Wurster appears to contradict this statement as it makes offset printing paper and allows coating with 0-10 percent by weight starch and coat weights more than 7 g/m<sup>2</sup> per side. As to unexpected benefits provided by the combination of claimed features, applicant has made no showing of unexpected benefits as to printability, blister resistance and gravure aptitude or other coating features in general, commensurate scope with the invention as claimed since, for example, none of the examples in the specification are indicated as being performed with a transfer roll coater system with the range of peripheral speeds, nor are examples shown as to the precise claimed range of polyvinyl alcohol and starch. As discussed in MPEP 716.02(d), a showing of unexpected results must be commensurate in scope with the claims in order to rebut a prima facie case of obviousness. As to claims 20-23, the further features of claims 20-23 are suggested by Wurster as discussed in the rejection above.

(B) The Examiner notes the further new rejections using the references to Garde and Alheid as to transfer roll coating systems for coating paper.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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